

Claims

1. A method of screening for therapeutic agents useful in the treatment of a disease comprising in a group of diseases consisting of cardiovascular diseases, cancer, metabolic diseases, hematological diseases, inflammation, respiratory diseases, neurological diseases and urological diseases in a mammal comprising the steps of
 - i) contacting a test compound with a GSK3B polypeptide,
 - ii) detect binding of said test compound to said GSK3B polypeptide.
2. A method of screening for therapeutic agents useful in the treatment of a disease comprising in a group of diseases consisting of cardiovascular diseases, cancer, metabolic diseases, hematological diseases, inflammation, respiratory diseases, neurological diseases and urological diseases in a mammal comprising the steps of
 - i) determining the activity of a GSK3B polypeptide at a certain concentration of a test compound or in the absence of said test compound,
 - ii) determining the activity of said polypeptide at a different concentration of said test compound.
3. A method of screening for therapeutic agents useful in the treatment of a disease comprising in a group of diseases consisting of cardiovascular diseases, cancer, metabolic diseases, hematological diseases, inflammation, respiratory diseases, neurological diseases and urological diseases in a mammal comprising the steps of
 - i) determining the activity of a GSK3B polypeptide at a certain concentration of a test compound,
 - ii) determining the activity of a GSK3B polypeptide in the presence of a compound known to be a regulator of a GSK3B polypeptide.
4. The method of any of claims 1 to 3, wherein the step of contacting is in or at the surface of a cell.
5. The method of any of claims 1 to 3, wherein the cell is in vitro.
6. The method of any of claims 1 to 3, wherein the step of contacting is in a cell-free system.

7. The method of any of claims 1 to 3, wherein the polypeptide is coupled to a detectable label.
8. The method of any of claims 1 to 3, wherein the compound is coupled to a detectable label.
9. The method of any of claims 1 to 3, wherein the test compound displaces a ligand which is first bound to the polypeptide.
10. The method of any of claims 1 to 3, wherein the polypeptide is attached to a solid support.
11. The method of any of claims 1 to 3, wherein the compound is attached to a solid support.
12. A method of screening for therapeutic agents useful in the treatment of a disease comprised in a group of diseases consisting of cardiovascular diseases, cancer, metabolic diseases, hematological diseases, inflammation, respiratory diseases, neurological diseases and urological diseases in a mammal comprising the steps of
 - i) contacting a test compound with a GSK3B polynucleotide,
 - ii) detect binding of said test compound to said GSK3B polynucleotide.
13. The method of claim 12 wherein the nucleic acid molecule is RNA.
14. The method of claim 12 wherein the contacting step is in or at the surface of a cell.
15. The method of claim 12 wherein the contacting step is in a cell-free system.
16. The method of claim 12 wherein polynucleotide is coupled to a detectable label.
17. The method of claim 12 wherein the test compound is coupled to a detectable label.
18. A method of diagnosing a disease comprised in a group of diseases consisting of cardiovascular diseases, cancer, metabolic diseases, hematological diseases, inflammation, respiratory diseases, neurological diseases and urological diseases in a mammal comprising the steps of
 - i) determining the amount of a GSK3B polynucleotide in a sample taken from said mammal,
 - ii) determining the amount of GSK3B polynucleotide in healthy and/or diseased mammals.

19. A pharmaceutical composition for the treatment of a disease comprised in a group of diseases consisting of cardiovascular diseases, cancer, metabolic diseases, hematological diseases, inflammation, respiratory diseases, neurological diseases and urological diseases in a mammal comprising a therapeutic agent which binds to a GSK3B polypeptide.
- 5 20. A pharmaceutical composition for the treatment of a disease comprised in a group of diseases consisting of cardiovascular diseases, cancer, metabolic diseases, hematological diseases, inflammation, respiratory diseases, neurological diseases and urological diseases in a mammal comprising a therapeutic agent which regulates the activity of a GSK3B polypeptide.
- 10 21. A pharmaceutical composition for the treatment of a disease comprised in a group of diseases consisting of cardiovascular diseases, cancer, metabolic diseases, hematological diseases, inflammation, respiratory diseases, neurological diseases and urological diseases in a mammal comprising a therapeutic agent which regulates the activity of a GSK3B polypeptide, wherein said therapeutic agent is
- 15 i) a small molecule,
- ii) an RNA molecule,
- iii) an antisense oligonucleotide,
- iv) a polypeptide,
- v) an antibody, or
- 20 vi) a ribozyme.
22. A pharmaceutical composition for the treatment of a disease comprised in a group of diseases consisting of cardiovascular diseases, cancer, metabolic diseases, hematological diseases, inflammation, respiratory diseases, neurological diseases and urological diseases in a mammal comprising a GSK3B polynucleotide.
- 25 23. A pharmaceutical composition for the treatment of a disease comprised in a group of diseases consisting of cardiovascular diseases, cancer, metabolic diseases, hematological diseases, inflammation, respiratory diseases, neurological diseases and urological diseases in a mammal comprising a GSK3B polypeptide.

24. Use of regulators of a GSK3B for the preparation of a pharmaceutical composition for the treatment of a disease comprised in a group of diseases consisting of cardiovascular diseases, cancer, metabolic diseases, hematological diseases, inflammation, respiratory diseases, neurological diseases and urological diseases in a mammal.
- 5 25. Method for the preparation of a pharmaceutical composition useful for the treatment of a disease comprised in a group of diseases consisting of cardiovascular diseases, cancer, metabolic diseases, hematological diseases, inflammation, respiratory diseases, neurological diseases and urological diseases in a mammal comprising the steps of
- i) identifying a regulator of GSK3B,
- 10 ii) determining whether said regulator ameliorates the symptoms of a disease comprised in a group of diseases consisting of cardiovascular diseases, cancer, metabolic diseases, hematological diseases, inflammation, respiratory diseases, neurological diseases and urological diseases in a mammal; and
- iii) combining of said regulator with an acceptable pharmaceutical carrier.
- 15 26. Use of a regulator of GSK3B for the regulation of GSK3B activity in a mammal having a disease comprised in a group of diseases consisting of cardiovascular diseases, cancer, metabolic diseases, hematological diseases, inflammation, respiratory diseases, neurological diseases and urological diseases.